

Toru Hamayasu's Presentation at the Chamber Meeting on June 21, 2005

Rail projects – Background and Conclusions

Several rail studies have been done for Oahu from 1967 to 1992. All concluded that a grade-separated fixed guideway system was warranted for Honolulu's primary urban corridor.

A little known fact is that the nation's first transit Alternatives Analysis (AA) was done in Honolulu in 1976. The federal transit agency did not issue the first guidebook for an AA until 1984. Honolulu has prepared three AA/DEISs (Draft Environmental Impact Statements) since that time.

The 1976 study was for a rail system. The 1990 study was for an automated fixed guideway system, that resulted in the issuance of a design and build contract in 1991. A firm fixed price contract was awarded for \$1.76 billion to construct a steel wheel on steel rail system from the Waiawa Interchange to the University of Hawaii at Manoa (UH-Manoa).

The most recent AA was released in 2000. A Bus Rapid Transit or BRT system was selected for a reason – the BRT was an enhanced bus system. To keep the cost low, buses were to use zipper lanes and dedicated lanes so they would not be slowed by congestion. It was the only system that could be implemented for less than \$300 million of local

money. The \$300 million ceiling was determined to be the maximum that the City could afford without additional revenue sources. A rail system was beyond reach.

Now in 2005, there is a concerted effort to establish a funding mechanism to increase the City's revenues to pay for a system more efficient than just buses.

Lessons Learned

A lot has been learned from past studies.

To provide a truly rapid operation, grade separation is essential. An underground system would cost as much as ten times more than an elevated system because of Honolulu's sub-surface conditions. Underground water poses an engineering challenge, but it is not the biggest problem. Varying soil conditions requiring constant changes of the drill bit is the primary reason for the high cost.

An elevated system can be built in Honolulu's primary urban corridor. Computer simulation has shown that there would be lots of riders on such a system. The 2005 ridership forecast was 185,000 daily riders on the rail. A grade separated system from Kapolei to UH-Manoa would cost over \$3 billion based on the actual fixed bid price, adjusted for inflation.

There has been talk of a \$2.6 billion estimate for the system from Kapolei to Iwilei. That is not an engineer's estimate.

It was a very rough estimate done by the State. This figure should not be used as the basis for any future cost comparison.

Nonetheless, \$3 billion is a lot of money. Federal funding to cover a portion of the cost would be a good thing. There was a federal authorization of \$618 million for the proposed Honolulu system in 1992. That money is gone but it is not unreasonable to expect federal participation of up to \$1 billion. Phoenix received nearly \$600 million this year for its \$1.3 billion system. The speculative ceiling of \$500 million mentioned often is not absolute. The FTA has told Honolulu that federal funding of up to \$1 billion is possible.

The negotiation process for federal funding of the construction costs would not occur for several more years, but meanwhile over \$2 billion will need to be generated as the local share.

Why investing in a rail system is a good idea

It should be obvious that Honolulu must make the best use of its limited space and resources. In the real world, given the same space, a rail system can carry more people more efficiently than any other mode of transportation.

Contrary to the claim of transit opponents, transit ridership is not declining. The American Public Transportation Association reports that transit ridership has risen since 1996. According to the Bureau of Transportation Statistics,

the growth rate in trips on transit actually increased more than the growth rate in automotive trips for the past 6 years. Transit trips in 2000 reached the highest point since 1959 and ridership has been increasing since 1995.

Since 1980, total light rail ridership grew between 14.5 percent and 75.8 percent in Dallas, St. Louis, Portland, San Francisco and Sacramento.

From 1990 to 2000, nationwide transit commuters on rail actually increased according to the 2000 US Census. What declined most were commuters by foot and carpool. If the census data are to be used as the guide for future investment, investing in High Occupancy Vehicle lanes for carpoolers does not make sense.

The Texas Transportation Institute's 1999 Annual Urban Mobility Study shows the greatest increases in congestion have been in areas that do not have rail transit. Transit, or more specifically rail, systems are making the difference in slowing down the growth of congestion in many cities.

There are specific examples of cities that have reduced congestion. St. Louis reports that 12,500 cars were removed from daily rush hour traffic by the MetroLink line. In Portland, drive alone trips decreased 60 percent while transit ridership increased from 13 to 20 percent. The Texas Transportation Institute study reported that 12 out of 13 cities with rail showed less increase in traffic congestion than those cities without rail.

One interesting side bar – home cities of known major transit critics are actually developing or expanding the rail system.

Wendell Cox is a well-known anti-rail advocate. St. Louis opened a light rail in 1993 and since then, there have been two extensions, with a third under construction.

Robert Poole of the Reason Foundation, and Peter Gordon and Harry Richardson of the University of Southern California in Los Angeles (LA) also advocate against rail. LA has built and expanded the Red Line, Blue Line, Green Line, Gold Line and Metrolink commuter rail system.

Randal O'Toole of the Thoreau Institute and American Dream Coalition is from Oregon where the Portland Max has been extended three times and another extension is under design.

Why not a HOT (High Occupancy Toll) lane?

HOT lanes are not cheap or simple as their proponents claim.

A 12-mile HOT lane from Waikale to Iwilei could cost from \$2 to \$3 billion based on today's construction cost. This is based on a cost of \$500 per square foot on a 40-foot wide viaduct and a few ramps for access.

HOT lanes elsewhere cost as much as \$8 per use one way. That is \$2,000 per year per vehicle.

Highways do not relieve congestion – they increase congestion.

Those who advocate building more highways should review technical studies that concluded that building more roads is not the way to reduce congestion. One study, published by the University of California-Berkeley, states that, “adding lane-miles does induce substantial new traffic...with so much induced traffic, adding road capacity does little to reduce congestion....” Mark Hansen, “Do New Highways Generate Traffic?”, *Access*, No. 7, Fall, 1995, pp.20, 22.

Another study states that, “highway improvement projects to accommodate fifteen years of traffic growth are choked with congestion in far less time.” David Lewis and Fred Laurence Williams, Policy and Planning as Public Choice: Mass Transit in the United States, Burlington, VT, Ashgate, 1999, pp. 206-207.

A Transportation Research Board report states that, “an expansion of 1 percent to an existing capacity of 1,000 lanes miles...would reduce (congestion) by one-eleventh of a percent on freeway...” Xuehao Chu, “Highway Capacity and Areawide Congestion,” paper presented at the Transportation Research Board 79th Annual Meeting, January 2000, Washington, DC. p. 10.

The Office of Technology Assessment estimates that the annual subsidy for car users ranges from \$0.4 to \$1 trillion and did not reduce congestion.

The facts are simple; the solution is not building more highways.

Some other facts about the rail proposal:

Studying a rail system's feasibility is the primary reason for conducting the AA/DEIS. Honolulu has not decided to implement the rail system but there is strong interest in moving toward building a rail system. The AA/DEIS will investigate if a rail system is a cost-effective investment and the City Council will decide whether to proceed with the rail system or some other transit improvements.

A rail system to serve the 25-mile corridor from Kapolei to UH-Manoa will be studied along with No-Build and Transportation System Management (TSM) alternatives. The TSM alternative includes various bus enhancements and localized traffic improvements that could provide a higher level of transit efficiency without major cost investments.

Conclusion

The anti-rail, anti-transit critics, nationally and locally, cleverly select and use numbers to create stories to oppose investments toward improving and upgrading transit services.

Mayor Hannemann's administration is not "selling" a rail system. It is making a serious effort to find the best transit investment for Honolulu. The decision on what system to buy should be based on facts and not on emotional pro- or anti- sentiments from those who have already formed their opinions. An informed decision based on facts would deliver an effective solution that makes the best use of taxpayer dollars.